Transport Canada Transports Canada

TP 1624

Marine Casualty Investigations

Enquêtes sur les accidents maritimes

Investigation Report to the Minister pursuant to sections 542 or 545 of the Canada Shipping Act

Rapport d'investigation au Ministre conformément aux articles 542 ou 545 de la Loi sur la marine marchande du Canada

Canada

Ce rapport est aussi disponible en français

REPORT OF INVESTIGATION INTO THE CIRCUMSTANCES ATTENDING THE COLLISION BETWEEN THE CANADIAN FISHING VESSEL "ATLANTIC PEGGY" AND THE DANISH FREIGHTER "SNOWDROP" SOME 60 MILES SOUTHWEST OF CAPE ST. MARY'S, NEWFOUNDLAND, JUNE 28, 1988

REPORT No. 522

These sections of the Investigation Report prepared pursuant to Section 542, or of the Preliminary Inquiry Report prepared pursuant to Section 545, of the Canada Shipping Act, are released for accident prevention purposes only and are confined to cause-related circumstances.

This report and its contents may be deficient and misleading if used in any other process and are not to be used or admitted in evidence in any legal proceedings, either civil or criminal, arising out of the casualty described in the report. The statements, opinions and findings in the report are those of the Marine Casualty Investigations Division only and do not constitute admissions made by or on behalf of Her Majesty the Queen in right of Canada.

Ces sections du rapport d'investigation ou du rapport préliminaire sont rédigées en vertu des articles 542 et 545 respectifs de la Loi sur la marine marchande du Canada et ne sont publiées qu' à des fins de prévention des accidents seulement et ne portent que sur les circonstances entourant le cas à l'étude.

Ce rapport et son contenu peuvent être insuffisants et trompeurs s'ils sont utilisés à d'autres fins et ne peuvent être utilisés ou acceptés comme preuve dans quelque procédure que ce soit, au civil ou au criminel, même si ces procédures découlent de l'accident décrit dans ledit rapport. Les déclarations, les opinions et les constatations de ce rapport appartiennent uniquement à la section des Enquêtes sur les accidents maritimes et ne constituent pas une acceptation de la part ou au nom de Sa Majesté du chef du Canada.

REPORT OF INVESTIGATION INTO THE CIRCUMSTANCES ATTENDING THE COLLISION BETWEEN THE CANADIAN FISHING VESSEL "ATLANTIC PEGGY" AND THE DANISH FREIGHTER "SNOWDROP" SOME 60 MILES SOUTHWEST OF CAPE ST. MARY'S, NEWFOUNDLAND, JUNE 28, 1988

Particulars of Vessel

Name	"ATLANTIC PEGGY"	"SNOWDROP"
Official Number	323023	D2570
Port of Registry	St. John's	Copenhagen
Flag	Canadian	Danish
Call Sign	VGKP	OWHR
Gross Tonnage	625	499
Net Tonnage	317	320
Length	46.5 m	67.29 m
Breadth	9.68 m	12.02 m
Depth	6.66 m	6.51 m
Draught (at time of incident)	F.4.3 m. A.4.6 m.	F.3.1 m. A.3.6 m.
Type	Stern Trawler	Refrig. Cargo
Built	1967	1978
Propulsion	Single Screw Controllable Pitch Propeller De Industrie 6-cylinder Diesel, 1500 BHP	Single Screw Controllable Pitch Propeller Mak, 6-cylinder Diesel, 1700 BHP
Cargo	9,072 kg. fish	392 tons frozen fish
Crew	14	11
Classification	Canadian Steamship Inspection	Bureau Veritas
Owners	Fishery Products International	Copenhagen Reefers

	St. John's Newfoundland	Copenhagen Denmark
Navigational Equipment		
	"ATLANTIC PEGGY"	**"SNOWDROP"**
Radar 1	Sperry, MK-127E	Furuno FR-80 30D
Radar 2	Sperry MK-74	Scanter 8000
Loran C	JRC-JNA 760	Nil
Echo Sounder	(2) Simrad	Simrad EL-N
Satellite Navigator	JRC-JLE 3800	Magnavox MX 1112
Log	Jungner-Sal Log	Amphitrite
Direction Finder	Nil	Taiyo
Auto Pilot	Sperry	Robertson
Gyro Compass	Sperry	Sperry
Compass	Magnetic	Magnetic
Chart in Use	CHS 4016	Admiralty 2666
Communications Equipment		
VHF Radio 1	Sailor	Sailor
VHF Radio 2	Sailor	Sailor
SSB Radio	Marconi 150	Skanti TRP 5000
SSB Radio	Marconi 100	

Description of Vessels

The **"ATLANTIC PEGGY"** is a typical stern trawler used in Canada's Atlantic offshore fishery. She is of steel construction, ice strengthened, single screw, controllable pitch, built and inspected in accordance with the Large Fishing Vessel Inspection Regulations. The superstructure, including

the wheel-house, is located forward and there is a large ramp through an opening at the stern where the gear (trawl) is hauled into the vessel.

The **"SNOWDROP"** is a small, single screw, controllable pitch reefer, engaged in the transport of frozen fish between Denmark and the U.S.A. She has three refrigerated holds. Her superstructure and engine-room are located aft. She is ice strengthened and classed with Bureau Veritas.

Background

NOTE: All times in this report are expressed in Universal Co-ordinated Time unless otherwise stated.

On the evening of June 28, 1988, the Canadian stern trawler "ATLANTIC PEGGY" and the Danish reefer "SNOWDROP" were in collision some 60 miles southwest of Cape St. Mary's, Newfoundland, during reduced visibility in fog.

The "SNOWDROP" was enroute to Gloucester, Massachusetts, U.S.A., from Denmark. The vessel was steaming at reduced speed on a course of 255° gyro and on gyro compass automatic steering.

The "ATLANTIC PEGGY" had just completed hauling the trawl on deck and had set her course on north by gyro compass automatic steering towards Marystown, Newfoundland.

Because of restricted visibility, both vessels had their radar in operation and observed each other at various ranges.

At about 2005 the bow of the "ATLANTIC PEGGY" came in contact with the port quarter of the "SNOWDROP" causing extensive damage from about two metres above the waterline. The "ATLANTIC PEGGY" sustained minor damage to her stem above the waterline.

After establishing radio communication with one another and assessing the damage, both vessels proceeded to Marystown where permanent repairs were carried out at a Marystown Shipyard.

There were no injuries or pollution as a result of this casualty but damage repair costs were in the order of 66,500 dollars for "ATLANTIC PEGGY" and some 165,000 dollars for the "SNOWDROP".

Narrative

"ATLANTIC PEGGY"

The "ATLANTIC PEGGY" was maintaining Newfoundland Daylight Saving Time (UTC - 1 1/2 hours) but, as stated, all the following times are given in UTC.

Upon completion of a six-month refit, the large stern trawler "ATLANTIC PEGGY" departed Marystown, Newfoundland, at 1730 June 27, 1988, with a crew of 14, in the light condition with 100 tons of ice on board. The vessel was bound for a fishing ground in area 30A and 3PS, including the fishing ground on the Green Bank.

The master and the mate were the navigating officers on board the "ATLANTIC PEGGY" maintaining a 6-hour rotating watchkeeping system, local time. The master's watch extended from 0600-1200 and resumed from 1800-2400; the mate's watch extended from 0000-0600 and from 1200-1800, although both were available if required.

While steaming towards the fishing ground on a southerly heading, each officer of the watch was assisted by a seaman. However, during fishing operations, only the officer of the watch would be present as the deck-hand would be working on the fish factory deck.

In spite of the poor visibility and fog which had persisted since the vessel's departure, and with the aid of two radars, an uneventful passage was made to Green Bank by the following morning, June 28, 1988. At 0915 the crew shot the fishing gear in position Lat.45°45'N., Long.054°19'W. After a four-hour tow of the bottom trawl, the gear was retrieved at 1325 with an estimated catch of 3175 kg.

At 1330 the mate relieved the master and shot the fishing gear at 1350 in position Lat.45°44'N., Long.54°36'W. It was retrieved at 1800 with an estimated catch of 3629 kg. At 1820 the gear was shot in position Lat.45°52'N., Long.54°49.5'W., in a water depth of 39 fathoms, anticipating a four-hour tow. Shortly afterwards, the company's stern trawler "GRAND COUNT" which was towing her fishing gear in the area, passed the "ATLANTIC PEGGY" starboard to starboard after both vessels had agreed to such an arrangement over the VHF Radio, Ch.6. The "ATLANTIC PEGGY" also informed the "GRAND COUNT" that they were working the north side of the Bank and maintaining a northerly heading.

At about 1900 the mate was relieved by the bosun for about ten minutes to have his supper. Prior to the mate

leaving the wheel-house, he observed a radar target some 6 miles distant, about 80-85 degrees on the starboard bow. He estimated the closest point of approach of the target to be not less than 3/4 of a mile. The visibility was zero in thick fog and the wind was from SW at 12-15 knots. The "ATLANTIC PEGGY" was on a course of 335°-340° gyro and on gyro compass automatic steering.

Once the mate returned to the wheel-house, the bosun informed him that he was suffering from back pain; then he went to advise the master of his illness. The radar target was now about 3 miles on the same bearing. At about 1940 the master went to the wheel-house and instructed the mate to retrieve the fishing gear so that they could take the bosun back to Marystown. Shortly afterwards, the master left the wheel-house to make a cup of tea.

The mate alerted the deck crew, engaged the trawl winches and commenced hauling the trawl at 1945. The radar target was about 3 miles and 20°-30° on the starboard bow. At the same time, the mate was gradually turning the vessel to starboard following the edge of the Bank and maintaining her stern to the wind. The vessel was taken off auto pilot and the speed was reduced to minimum steerage-way (approximately one knot).

In preparation for taking over the watch, the master returned to the wheel-house with his tea and watched the mate operating the winch from the aft wheel-house control. At about 1950 he looked at the radar and observed a target one mile away on the starboard bow. The radar had been operating at 6-mile range and was reduced to 3-mile range to maintain a close watch on the other vessel's movements.

At about 2000 the crew had completed hauling the trawl and were in the process of dumping the cod-end into the fish tank of the factory deck. Shortly afterwards the pitch was increased to 'slow'; the course was set at 360° T&G and the auto pilot was switched on. Shortly afterwards one of the deck-hands signalled that he had sighted a freighter coming out of the fog. The mate put the pitch 'full astern' and the master put the helm 'hard to starboard' but within seconds the collision occurred. The time of the collision, as logged on board the "ATLANTIC PEGGY", was 2005, June 28, 1988, in position Lat.45°57.9'N., Long.54°47.3'W. The "ATLANTIC PEGGY" was holed in the stem some two metres above the waterline.

The speed of the "ATLANTIC PEGGY" prior to the collision was about 1 to 2 knots. Her average towing speed is about 3 knots and the vessel has a cruising speed of 10.5 knots at 285 rpm.

"SNOWDROP"

On June 28, 1988 the "SNOWDROP" was maintaining Atlantic Daylight Saving Time (UTC - 3 hours) but, as stated, all the following times are expressed in UTC.

The small Danish reefer ship "SNOWDROP" departed Hanstholm, Denmark, on June 18, 1988, with a crew of 11, including the master, on board and a cargo of frozen fish. Her destination was Gloucester, Massachusetts, U.S.A., following a rhumb line from a position off the Faeroe Islands to a position 10 miles off Cape Race, then proceeding on a coastal route north of Sable Island towards her destination.

Navigation on board the "SNOWDROP" was carried out by the master and two officers, watch times were ship board time. The master stood the 0800-1200 watch; the first mate the 1200-1800, then the 0000-0400 watch; the second mate the 1800-2400, then the 0400-0800 watch.

The engine-room was manned by two engineers on day work and the engine was operating on bridge control. Up to June 28, 1988, an uneventful passage was made across the Atlantic Ocean with the aid of two radars and a satellite navigator.

At 1100, June 28, 1988, the "SNOWDROP" was in position Lat.46°36'N., Long.52°42'W., steaming on a course of 239° T&G. Both radars were in operation due to restricted visibility, and a look-out was assigned to every watch. At 1210 Cape Race was bearing 336°, at a distance of 9.8 miles. Because of dense fog the speed of the vessel was reduced from 12.5 knots to 10.5 knots at 1400.

During the master's four-hour watch, no vessel was observed either visually or on radar.

At 1500 the "SNOWDROP" was in position Lat.46°12'N., Long.53°29'W. and a course alteration was made to 255° gyro and on gyro compass automatic steering. The chief mate relieved the master and the look-outs relieved each other. At 1800 the master relieved the mate for coffee break for a period of 15-20 minutes. At 1900 the position of the "SNOWDROP" obtained by the satellite navigator was Lat.46°01'N., Long.54°31'W., and at the same time the look-outs relieved each other. The starboard radar was operating on 6-mile range and the port one was on 12-mile range.

At about 1920 the radar showed a target about 10° on the port bow, distance 11 miles. The officer of the watch maintained a close radar observation, using the parallel-line cursor and concluded that the target appeared to be heading

in the opposite direction. Although no radar plots were performed on board, the chief officer estimated the closest point of approach between the two vessels to be about 10 cables. As the distance decreased to 3 miles, the target apparently made a starboard course alteration causing a large change in the bearing and the closest point of approach appeared to be increasing. Based on this observation, the decision was made to maintain the same course and speed.

During that time, the radar range was reduced to 3 miles, and extensive sea clutter appeared on the radar screen. As the target reached one mile away, the chief mate was unable to positively identify it among the clutter. He saw the "ATLANTIC PEGGY" appear out of the fog on the port bow heading towards the "SNOWDROP'S" bridge and accommodation at a distance of about 50 metres.

Attempting to avoid the collision and reduce the risk of injury to the crew of the "SNOWDROP" while they were in their living quarters, the officer of the watch increased the speed to full, to pass ahead and clear his stern from the northbound vessel while still on automatic steering. The bow of the "ATLANTIC PEGGY" came in contact with the port quarter of the "SNOWDROP" at an angle of impact of approximately 90° in the area of the port aft lifeboat deck fracturing several shell platings in way of the dry storeroom and the steering compartment. The damaged area (hole) was about two metres above the waterline.

The time of the collision logged on board the "SNOWDROP" was 1955, June 28, 1988, in position Lat.45°57'N., Long. 54°47'W. The time logged by "ATLANTIC PEGGY" was 2005.

The weather was reported on board as follows:

Wind	Southeast 18 knots
Visibility	50 metres
Sea State	Moderate Waves
Sea Temperature	+7°C,
Air Temperature	+12°C.

When the collision occurred the master of the "SNOWDROP" was in the day cabin. He arrived in the wheel-house moments later, found the engine stopped and was unable to observe the "ATLANTIC PEGGY" visually or on the radar.

Events Following the Collision

After the collision, the "ATLANTIC PEGGY" and the "SNOWDROP" established radio communication with each other on the VHF Radio, Ch.16, exchanged names, general information

including their seaworthiness and to ascertain if there were any injuries aboard. The crew of the "ATLANTIC PEGGY" donned their survival suits, proceeded to the wheel-house and then to their lifeboat stations until the damage was assessed.

Both vessels were stopped in the water at a distance of 1/4 mile from each other. The master of the "SNOWDROP" requested the exact position of the "ATLANTIC PEGGY" in relation to his vessel and was advised that his vessel was 1/4 mile on the port side of the "ATLANTIC PEGGY". At about 2003 the "ATLANTIC PEGGY" informed the "GRAND COUNT" and St. Lawrence Coast Guard Radio of the collision. All agencies were advised and a 'Mayday' relay was broadcast immediately. The stern trawler "GRAND COUNT" was the nearest vessel in the area, approximately 6 miles away, and she proceeded to the scene with the fishing vessel "ATLANTIC" and the CCGS "SIR WILFRED GRENFELL".

At 2028 after internal examination of damage by the crew of both vessels, St. Lawrence Coast Guard Radio was advised that no escort was required and that both vessels were proceeding at reduced speed towards Marystown for repairs. Search and Rescue released all vessels and requested both the "ATLANTIC PEGGY" and the "SNOWDROP" to report every two hours.

The crew of the "SNOWDROP" used inflatable rubber air bags in the damaged stern area to prevent seawater from entering the vessel in case the weather conditions deteriorated and maintained a close watch on the damaged area.

Being less damaged, and familiar with the coast, the "ATLANTIC PEGGY" was in the lead and in constant communication with the "SNOWDROP" until they arrived safely at the entrance to Mortier Bay in the early morning of June 29, 1988. The "SNOWDROP" did not carry the appropriate charts for the area; however, she made arrangements to obtain a pilot at 0730. The "ATLANTIC PEGGY" arrived safely at the Fishery Products International wharf in Marystown at approximately 0542 and the "SNOWDROP" was secured at the Marystown government wharf at 1045, June 29, 1988.

There was no personal injury nor was pollution reported by either vessel.

Analysis

1. Damage to Vessels

"ATLANTIC PEGGY"

Shell plates F10 and F12 port and starboard were buckled and ruptured and the forward end of shell plate E12 on the starboard side was ruptured. Soft nose stem plates 51, 52 and 53 were distorted. The bulwark and three supports on the port side were buckled and distorted. The upper section of the stem bar and one breast hook were distorted. The starboard anchor shank was bent and the main deck lighting support was buckled.

"SNOWDROP"

The deck plating on the port side aft of the lifeboat deck was buckled and torn between frames 2-15. The fast rescue craft, guard rails, stanchions and the boat crane were all extensively damaged. The port side of the weather deck sustained damage to the stringer, two bollards, king post and auxiliary derrick. The domestic freezer compartment, vertical casing and the fire main line on the weather deck were damaged. The after sheer strake, port side between frames 2 and 15 was ruptured and partly missing and the bulwark plating from frame 8 to the stern was torn. The steering gear compartment, the dry stores room and the refrigerator stores compartment sustained minor damage.

2. Weather Conditions

Synoptic Situation

On June 26 a low pressure system was moving along the Gaspe Peninsula with a warm front approaching the South Coast Marine Area from the south. A ridge of high pressure lay offshore over the Funk Island Bank and the Northern Grand Banks. The warm sector reached the South Coast in the early morning of June 27. As the day progressed the low pressure moved over Anticosti Island and the warm front headed into northern Newfoundland waters with moderate to strong southwesterly winds over the South Coast.

Visibilities at the land stations during that time from the evening of June 26 to the morning of June 27, went from 4 - 6 miles down to 1/8 - 1/4 of a mile. These conditions persisted through to the evening of June 28, as the moderate to strong southerly flow of moist air

maintained the extensive fog.

Marine Forecasts for the South Coast

Marine forecasts, issued in the morning and afternoon, for the evening of June 26, indicated winds increasing to southeasterly 20 to 30 knots overnight, with showers and extensive fog developing overnight and persisting through Monday, June 27. The marine forecasts issued on the 27th showed southeasterly winds of 20 to 30 knots veering to southwesterly of 20 to 30 knots around noon of that day. Poor visibilities in showers and extensive fog were forecast through that day as well as June 28. The forecast issued on Tuesday morning, June 28, indicated southwesterly winds of 20 to 25 knots for the day, with poor visibilities in showers and extensive fog. Thundershowers were included in the forecast for the area in the late morning forecast issue. An early evening amended forecast showed southwesterly winds of 20 to 30 knots diminishing to southerly winds of 15 to 20 knots on Wednesday. Extensive fog and poor visibilities were still part of the forecast. Air temperatures at the time were in the 12 to 14 degree Celsius range.

The "SNOWDROP" had been steaming through poor visibility and fog since noon of June 27, 1988, until the time of collision on June 28, 1988, and the same was confirmed by the "ATLANTIC PEGGY".

3. **Speed of Vessels**

As the crew of the "ATLANTIC PEGGY" had completed hauling the trawl and were working on deck, the vessel was steadied on a northerly gyro heading. The estimated speed of the "ATLANTIC PEGGY" was 2 knots, however, seconds prior to the impact, the pitch was put to 'full astern' reducing her speed to minimum. The vessel had advanced half a mile from the time she started hauling the trawl until the collision which was approximately 15-20 minutes later. This calculation was based on the difference between the initial position at the time of hauling the trawl and her position at the time of collision. The information was stored in the vessel's plotter. The Satellite Navigator and the Loran C were connected to the plotter, continuously updating the position of the "ATLANTIC PEGGY".

The "SNOWDROP" was steaming at a reduced speed of 10.5 knots, on a westerly heading. Her average cruising speed is 12.5 knots. The Collision Regulations, Part B, Steering and Sailing Rules, Section 1 - Conduct of

Vessels in Any Condition of Visibility, Rule 6 - Safe Speed, states, in part:

> Every vessel shall at all times proceed at a safe speed so that she can take proper and effective action to avoid collision and be stopped within a distance appropriate to the prevailing circumstances and conditions.
>
> In determining a safe speed the following factors shall be among those taken into account:
>
> (a) By all vessels:
>
> (i) the state of visibility.
>
> (ii) the traffic density including concentration of fishing vessels or any other vessels.
>
> (iii) the manoeuvrability of the vessel with special reference to stopping distance and turning ability in the prevailing conditions.
>
> (b) Additionally, by vessels with operational radar:
>
> (i) the characteristics, efficiency and limitations of the radar equipment...

Rule 19 of the Collision Regulations states, in part:

> (a) This rule applies to vessels not in sight of one another when navigating in or near an area of restricted visibility.
>
> (b) Every vessel shall proceed at a safe speed adapted to the prevailing circumstances and conditions of restricted visibility. A power-driven vessel shall have her engines ready for immediate manoeuvre.

4. **Speed and Courses**

The time of collision, as logged by "SNOWDROP", was 1955; "ATLANTIC PEGGY" logged this time as 2005. It is not known if the clocks of either or both vessels were

correct, however as "ATLANTIC PEGGY" advised St. Lawrence CGRS of the collision at 2003 her logged time of 2005 would appear to be in error.

For the purposes of time, speed and distance calculations, the time of collision, as logged by "SNOWDROP" has been accepted.

Utilizing a rhumb line navigation method to obtain the course, distance and speed of each vessel, the following was found:

The "ATLANTIC PEGGY"

Time (UTC)	True Course	Distance	Average Speed
0915-1325	265°	11.9 miles	2.86 Knots
1350-1800	310°	12.35 miles	2.96 "
1820-1950	015°	5.6 miles	3.73 "
1950-2005	008°	0.5 miles	2.0 "

The "SNOWDROP"

1500-1900	255°	44.37 miles	11.1 Knots
1900-1955	255°	11.77 miles	12.8 "

The last calculation was carried out by using the following collision position for both vessels: Lat. 45°57.9'N, Long. 54°47.3'W.

5. **Fog Signals**

Neither the "ATLANTIC PEGGY" nor the "SNOWDROP" were sounding the appropriate fog signals for the prevailing conditions prior to the collision. Initially, the "ATLANTIC PEGGY" was engaged in fishing and was required to comply with Rule 35 (c). As power-driven vessels making way, both the "SNOWDROP" and "ATLANTIC PEGGY" were required to comply with Rule 35 (a). Rule 35 of the Collision Regulations, Sound Signals in restricted Visibility, states, in part:

> In or near an area of restricted visibility, whether by day or night, the signals prescribed in this Rule shall be used as follows:
>
> (a) A power-driven vessel making way through the water shall sound at intervals of not more than 2 minutes one prolonged blast.

(b) A power-driven vessel underway but stopped and making no way through the water shall sound at intervals of not more than 2 minutes two prolonged blasts in succession with an interval of about 2 seconds between them.

(c) A vessel not under command, a vessel restricted in her ability to manoeuvre, a vessel constrained by her draught, a sailing vessel, a vessel engaged in fishing and a vessel engaged in towing or pushing another vessel shall, instead of the signals prescribed in paragraphs (a) or (b) of this Rule, sound at intervals of not more than 2 minutes three blasts in succession, namely one prolonged followed by two short blasts...

6. **Radars**

The "**ATLANTIC PEGGY**" was equipped with two Sperry radars, 3 cm each. One set was located near the aft winch control console and the other set was located on the port side of the wheel-house. Both sets were operating in the relative motion, unstabilized 'ship's head up' display. The radars were operating satisfactorily prior to and after the collision on June 28, 1988.

After the initial radar observation of the "SNOWDROP", at a distance of about 6 miles, bearing 80° on the starboard bow, the officer of the watch predicted the closest point of approach between the two vessels to be not less than 3/4 mile. During that time the "ATLANTIC PEGGY" was on a course of 335°. The parallel-line cursor on the radar was used to determine if the risk of collision existed, although no actual plotting was being performed. One radar was fitted with a reflection plotter; however, no grease pencil marker or radar plotting sheets were on board.

The "**SNOWDROP**" was equipped with one Furuno (3 cm) radar located on the starboard side and one Scanter (10 cm) radar located on the port side of the wheel-house. Both radars were operating satisfactorily and in the relative motion unstabilized 'ship's head up' display prior to and after the collision on June 28, 1988. The officer of the watch used the radar parallel-line cursor and determined the closest point of approach to be about one mile. The distance appeared to be increasing after the

target made a starboard course alteration at a range of 3 miles. There was no actual radar plotting being performed. Because extensive radar clutter appeared at the low range, the officer encountered difficulty in monitoring the progress of the "ATLANTIC PEGGY".

Sea clutter or radar clutter may be suppressed by adjusting the appropriate sea or rain clutter controls. The purpose of these controls is to enable the detection of close targets which otherwise might be obscured by the radar clutter.

The Recommended Code of Nautical Procedures and Practices, Part II 'Recommendation on Operational Guidance for Officers in Charge of a Navigational Watch - Radar', states, in part:

> 14. The officer of the watch should use the radar when appropriate and whenever restricted visibility is encountered or expected, and at all times in congested waters having due regard to its limitations.
>
> 15. Whenever radar is in use, the officer of the watch should select an appropriate range scale, observe the display carefully and plot effectively.
>
> 16. The officer of the watch should ensure that range scales employed are changed at sufficiently frequent intervals so that echoes are detected as early as possible.
>
> 17. It should be borne in mind that small or poor echoes may escape detection.
>
> 18. The officer of the watch should ensure that plotting or systematic analysis is commenced in ample time.
>
> 19. In clear weather, whenever possible, the officer of the watch should carry out radar practice.

Rule 7, 'Risk of Collision' of the Collision Regulations states, in part:

> (a) Every vessel shall use all available means appropriate to the prevailing circumstances and conditions to

determine if risk of collision exists. If there is any doubt such risk shall be deemed to exist.

(b) Proper use shall be made of radar equipment if fitted and operational, including long-range scanning to obtain early warning of risk of collision and radar plotting or equivalent systematic observation of detected objects.

(c) Assumptions shall not be made on the basis of scanty information, especially scanty radar information...

7. Look-out

Rule 5, "Look-out", of the Collision Regulations states:

> Every vessel shall at all times maintain a proper look-out by sight and hearing as well as by all available means appropriate in the prevailing circumstances and conditions so as to make a full appraisal of the situation and of the risk of collision.

While the "ATLANTIC PEGGY" was fishing, no proper look-out was maintained as required by the Regulations. The Recommended Code of Nautical Procedures and Practices, Part I, (9) Look-out, states:

> In addition to maintaining a proper look-out for the purpose of fully appraising the situation and the risk of collision, stranding and other dangers to navigation, the duties of the look-out shall include the detection of ships or aircraft in distress, shipwrecked persons, wrecks and debris. In maintaining a look-out the following shall be observed:
>
> (a) the look-out must be able to give full attention to the keeping of a proper look-out and no other duties shall be undertaken or assigned which could interfere with that task;
>
> (b) the duties of the look-out and the helmsman are separate and the helmsman shall not be considered to be the look-out while steering, except in small ships where an unobstructed all-round view is provided at the steering position and there is no impairment of night vision or

other impediment to the keeping of a proper look-out. The officer in charge of the watch may be the sole look-out in daylight provided that on each such occasion:

(i) the situation has been carefully assessed and it has been established without doubt that it is safe to do so;

(ii) full account has been taken of all relevant factors including, but not limited to:

- state of weather
- visibility
- traffic density
- proximity of danger to navigation
- the attention necessary when navigating in or near traffic separation schemes;

(iii) assistance is immediately available to be summoned to the bridge when any change in the situation so requires.

Aboard the "SNOWDROP" the look-out was monitoring the Scanter radar located on the port side and the officer of the watch was monitoring the Furuno radar located on the starboard side.

8. **Radio Communications**

The "ATLANTIC PEGGY" and the "SNOWDROP" were both equipped with two VHF radios located in the wheel-house and maintained a continuous listening watch on the international distress frequency 156.800 MHZ (Channel 16 VHF). Prior to the collision of June 28, 1988, neither vessel attempted to call the other to determine their intentions.

The VHF Radiotelephone Practices and Procedures Regulations, under the heading "Navigation Safety Call", require every ship, other than a dredge or floating plant, that is maintaining a listening watch pursuant to Section 9, (listening watch), shall make a navigation safety call on the frequency on which it is maintaining the listening watch.

(a) when risk of collision with another ship is deemed to exist under those provisions of the Collision Regulations that apply in the area being navigated

by the ship;

(b) when the navigation safety call of another ship indicates that a close quarters situation may develop...

(f) when the ship is approaching, in restricted visibility,

(i) a charted route, including a ferry route, or

(ii) a concentration of vessels;

(g) before the ship commences a manoeuvre that will impede the safe navigation of other ships;

(h) when a ship is engaged in fishing with nets, lines, trawls, trolling lines or other apparatus, or restricted in its ability to manoeuvre in or near a routing system and is being approached by another ship, other than a ship engaged in fishing.

9. **Action to Avoid Collision**

After both vessels sighted each other out of the fog, at a distance of about 50 metres, the "ATLANTIC PEGGY" put the helm hard to starboard and the pitch full astern. The "SNOWDROP" put the pitch on full ahead maintaining the same gyro heading. Neither the "ATLANTIC PEGGY" nor the "SNOWDROP" took any early action to avoid the collision.

Although there was extensive clutter on the radar display at low range, the "SNOWDROP" maintained her speed and course while leaving the steering on auto-pilot. The "ATLANTIC PEGGY" made a succession of small alterations of course to starboard without proper assessment of the situation which led to the development of a close quarters situation.

Rule 8, Action to avoid Collision, of the Collision Regulations states:

(a) Any action taken to avoid collision shall, if the circumstances of the case admit, be positive, made in ample time and with due regard to the observance of

good seamanship.

(b) Any alteration of course and/or speed to avoid collision shall, if the circumstances of the case admit, be large enough to be readily apparent to another vessel observing visually or by radar; a succession of small alterations of course and/or speed should be avoided.

(c) If there is sufficient sea room, alteration of course alone may be the most effective action to avoid a close-quarters situation provided that it is made in good time, is substantial and does not result in another close-quarters situation.

(d) Action taken to avoid collision with another vessel shall be such as to result in passing at a safe distance. The effectiveness of the action shall be carefully checked until the other vessel is finally past and clear.

(e) If necessary to avoid collision or allow more time to assess the situation, a vessel shall slacken her speed or take all way off by stopping or reversing her means of propulsion.

Rule 19 of the Collision Regulations, "Conduct of vessels in restricted visibility" states, in part:

> A vessel which detects by radar alone the presence of another vessel shall determine if a close quarters situation is developing and/or risk of collision exists. If so, she shall take avoiding action in ample time...

10. Taking over the Navigational Watch

The Recommended Code of Nautical Procedures and Practices, adopted by the International Convention on Standards of Training, Certification and Watchkeeping for Seafarers in 1978, Part 1, (8) Navigational duties and responsibilities states, in part:

(a) The officer in charge of the watch shall:

(i) keep his watch on the bridge which

he shall in no circumstances leave until properly relieved;

(ii) continue to be responsible for the safe navigation of the ship, despite the presence of the master on the bridge, until the master informs him specifically that he has assumed that responsibility and this is mutually understood;

(iii) notify the master when in any doubt as to what action to take in the interest of safety.

Part II, (7) and (8) Taking over the navigational watch states, in part:

7. The relieving officer should not take over the watch until his vision is fully adjusted to the light conditions and he has personally satisfied himself regarding:

(d) navigational situation, including but not limited to the following:

(iii) presence and movement of ships in sight or known to be in the vicinity.

8. If at the time the officer of the watch is to be relieved a manoeuvre or other action to avoid any hazard is taking place, the relief of the officer should be deferred until such action has been completed.

The navigation officers on board the "ATLANTIC PEGGY" did not meet the requirements of the Recommended Code as they did not maintain a close radar scrutiny on the progress of the "SNOWDROP" and did not brief each other of her existence.

The following is Fishery Products International's Standing Orders to their Captains about how to hand over the watch:

The watch must not be handed over until the officer coming on watch is completely aware of all factors affecting the navigation, stability, and safety of the trawler. This is particularly important in situations where there is a lot of fishing or shipping

activity, making a landfall or port, restricted visibility, ice build-up, ice-navigation, or proximity to ice-berg(s).

The Captain must not leave the bridge whilst a potentially dangerous situation is developing.

11. Watch Arrangements Aboard "ATLANTIC PEGGY"

There was a total complement of 14 persons on board the "ATLANTIC PEGGY" which included the master and mate in charge of the deck watch; the chief and second engineer in charge of the engine-room; one cook and nine deck-hands including a bosun.

While the vessel was steaming to and from the fishing grounds, the deck-hands were assigned a rotating bridge watch to assist the master and mate. Once the vessel commenced fishing operations, this procedure was changed to allow the deck-hands to work on the fish factory deck with a minimum of 6 persons per shift. This was achieved by assigning the deck crew to a rotating 12-hour shift with 3 men on each shift. The crew's shifts overlapped to meet the requirement of the fishing operation. Such practice is considered standard on board the majority of trawlers.

On the day of the collision, the officer of the watch was the sole person in the wheel-house during the fishing operations. Section 7(1) of the Ship's Deck Watch Regulations made pursuant to the Canada Shipping Act states in part:

> ... each deck watch on a ship shall consist of at least the following persons:
>
> (a) a person in charge of the deck watch;
>
> (b) an additional person...

12. Experience and Qualifications of Personnel

"ATLANTIC PEGGY"

The master of the "ATLANTIC PEGGY" holds a Canadian Fishing Master Class II Certificate, issued by the Department of Transport on April 9, 1987. He had also completed a SEN 1 course in 1986. He had made 21 fishing trips as relief master since 1987, aboard various Fishery Products International trawlers. The average fishing trip is about 10 days. He also has 10

years experience as mate and his total seatime is about 20 years.

The mate of the "ATLANTIC PEGGY" holds a Canadian Fishing Master Class III Certificate issued by the Department of Transport on March 24, 1983. He had also completed a SEN 1 course in 1983. He has about 8 years seagoing experience on board various Fishery Products International trawlers and had made 17 trips as mate since 1987.

"SNOWDROP"

The master of the "SNOWDROP" holds a Danish Master Foreign-Going Certificate of Competency issued at Copenhagen on March 13, 1961. He completed an ARPA, (Automatic Radar Plotting Aid) course in September 1986. He has 41 years seagoing experience of which 20 years have been as master. He joined the "SNOWDROP" on June 18, 1988.

The first mate of the "SNOWDROP" holds a Danish Master Certificate up to 799 Gross Tonnage, issued at Torshavn, Foroyar, on March 19, 1975. He completed a Radar Simulator Course in March 1977. He has been employed by the present shipping company as first mate since 1975. He has about 38 years seagoing experience which include several years as master aboard fishing vessels.

The look-out on watch holds a Danish Master Certificate for fishing vessels issued in 1981, Seaman Qualifications issued in 1972, including an Offshore Sea Rescue Certificate. He has 15 years seagoing experience.

Findings

The collision between the Canadian stern trawler "ATLANTIC PEGGY" and the Danish reefer "SNOWDROP", which occurred in dense fog, was caused by the non observance by both vessels of certain provisions of the Collision Regulations and the Recommended Code of Nautical Procedures and Practices.

It would appear that the following were contributing factors:

- both vessels did not determine, by radar plotting or equivalent systematic observation, if risk of collision existed;

- both vessels made assumptions regarding the nature and intentions of the other vessel based on scanty radar information;

- neither vessel sounded the appropriate sound signals in restricted visibility;

- prior to the collision, neither vessel made a navigation safety call on the international distress frequency 156.8 MHz (Channel 16 VHF);

- neither vessel took early action as necessary to avoid collision;

- the "ATLANTIC PEGGY" did not maintain a proper look-out so as to make a full appraisal of the situation; and

- the "SNOWDROP" did not maintain a safe speed.

Other Findings

The navigation officers aboard the "ATLANTIC PEGGY" did not properly hand over the watch.

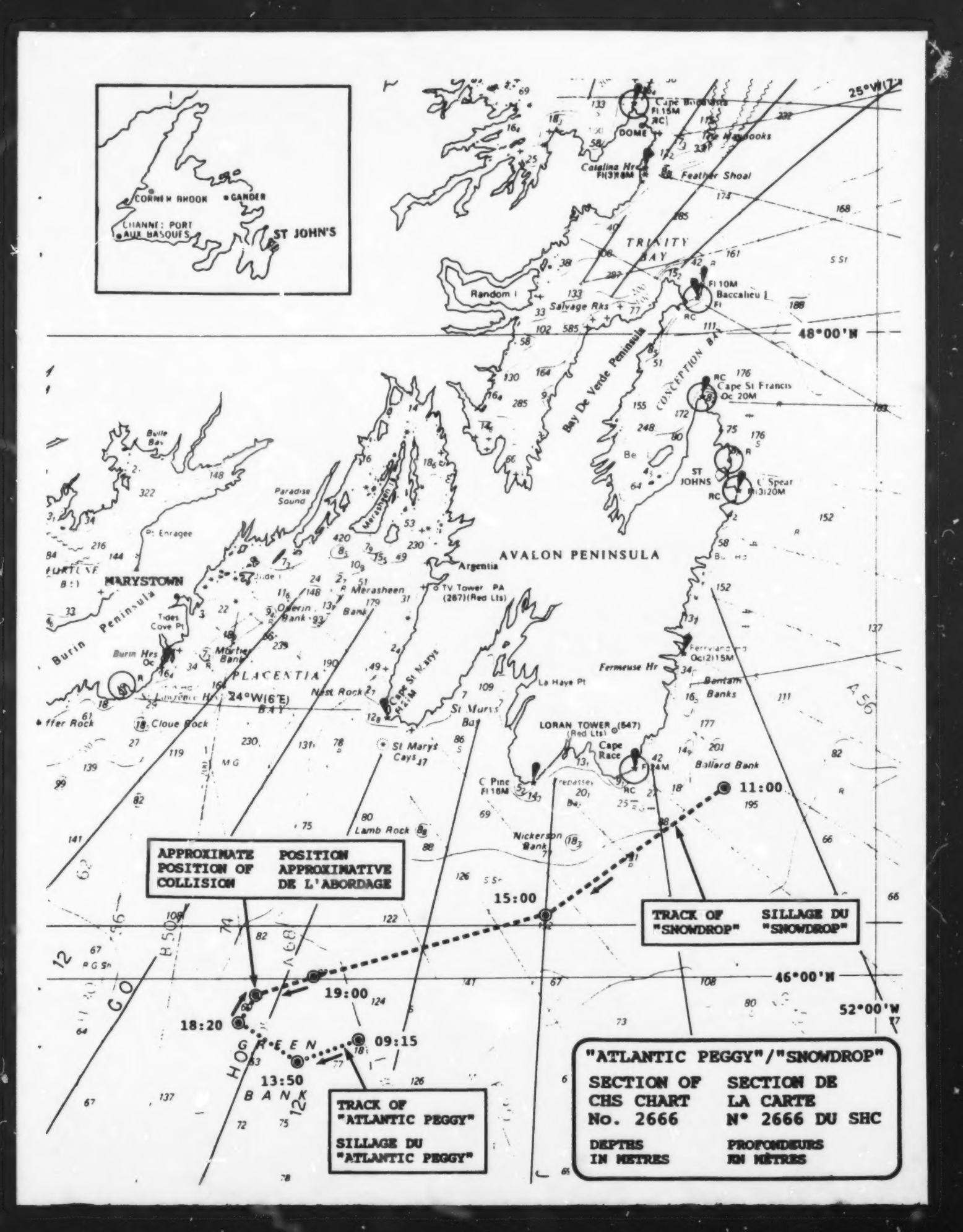
The "ATLANTIC PEGGY" did not have the necessary personnel on watch.

The officer of the watch aboard the "SNOWDROP" did not properly set the anti-clutter radar controls.

There was a discrepancy of some 10 minutes between the time of collision as logged on board each vessel.

Marine Casualty Investigations
Transport Canada
110 O'Connor Street
Ottawa, Ontario
K1A 0N5

MAY, 1989.


CORNER BROOK
GANDER
CHANNEL PORT AUX BASQUES
ST JOHN'S
APPROXIMATE POSITION OF COLLISION
POSITION APPROXIMATIVE DE L'ABORDAGE
TRACK OF "SNOWDROP"
SILLAGE DU "SNOWDROP"
TRACK OF "ATLANTIC PEGGY"
SILLAGE DU "ATLANTIC PEGGY"
"ATLANTIC PEGGY"/"SNOWDROP"
SECTION OF CHS CHART No. 2666
SECTION DE LA CARTE N° 2666 DU SHC
DEPTHS IN METRES
PROFONDEURS EN MÈTRES
AVALON PENINSULA
TRINITY BAY
CONCEPTION BAY
PLACENTIA BAY
MARYSTOWN
Burin Peninsula
Bay De Verde Peninsula
Cape Race
Cape St Francis
Baccalieu I
Cape Bonavista
Random I
Salvage Rks
Feather Shoal
Argentia
Merasheen
Paradise Sound
Fermeuse Hr
La Haye Pt
St Mary's Bay
Nest Rock
Cape St Mary's
Lamb Rock
Nickerson Bank
Ballard Bank
Bantam Banks
Merasheen Bank
Martin Bank
Burin Hrs
Tides Cove Pt
Cloue Rock
St Mary's Cays
LORAN TOWER (547)
TV Tower PA (287)(Red Lts)
Ferryland Oc(2)15M
C Pine Fl 16M
C Spear Fl(3)20M
Catalina Hr Fl(3)8M
The Hawkbooks
DOME
Bay de Verde
Bonavista
Trepassey
Enragee Pt
Belle Bay
Burin Hrs Oc
St Lawrence Hr
Offer Rock
Green Hope Bank
11:00
15:00
19:00
09:15
18:20
13:50
46°00'N
48°00'N
52°00'W
24°W(6°E)
25°W(7°E)

"SNOWDROP"

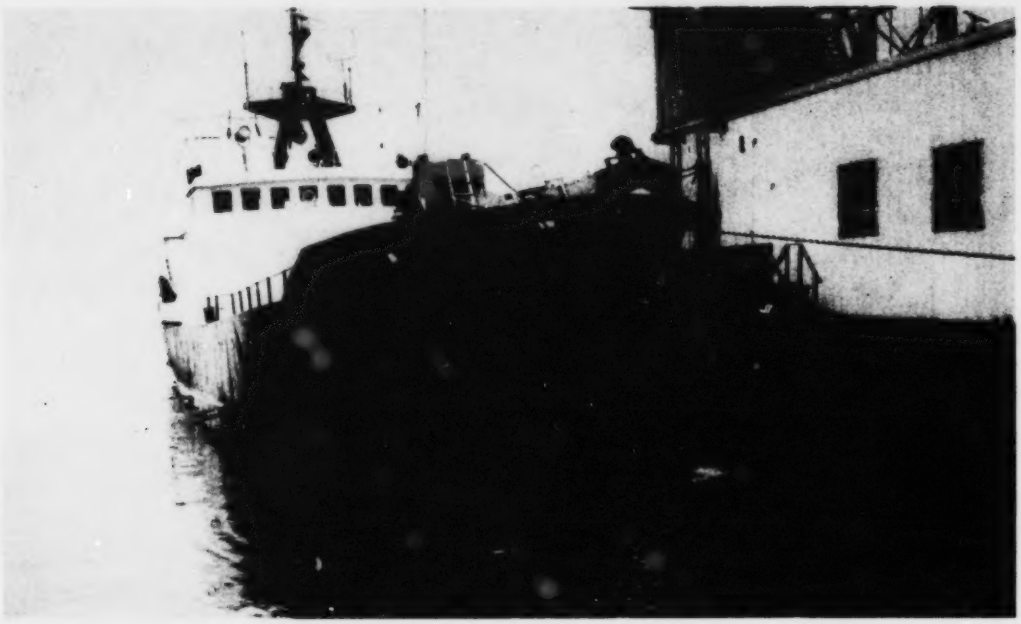
Damaged area on port side aft showing the inflatable rubber air bags which were used temporarily to prevent entry of sea water into the vessel.

La partie arrière du côté bâbord est endommagée. On peut apercevoir les coussins de caoutchouc gonflables temporairement utilisés pour empêcher les infiltrations.

"SNOWDROP"

Damage to bulwark and main deck.
Avaries au pavois et au pont principal.

"ATLANTIC PEGGY"



Damage to the stem.
Avaries à l'étrave.